

LISTING OF THE CLAIMS

1. (Previously Presented) A method to cache and redistribute streaming digital data content in real time to a plurality of requesting client machines, said method comprising:

receiving a first content request, for a streaming content, from a requesting client machine, wherein said requesting client machine does not send information identifying a secondary server containing said streaming content corresponding to said first content request;

generating a second content request based on the first content request;

transmitting the second content request to at least one secondary server known to contain said streaming content;

receiving said streaming content from said at least one secondary server in response to said second content request;

caching locally at least a first portion of the received streaming content; re-streaming the first portion of the cached streaming content to the requesting client machine as at least a second portion of the received streaming content is cached; and

re-streaming, at a later time from the local cache, at least one of the first portion and the second portion of the streaming content to a same or different requesting client machine in response to a subsequent content request.

2. (Previously Presented) The method of claim 1, further comprising:

determining, before generating the second content request, if at least a part of the streaming content corresponding to the first content request is locally cached; and

re-streaming the locally cached streaming content as at least a part of the content corresponding to the first content request and performing the generating, transmitting, receiving and caching steps for any un-cached part of said real-time streaming content corresponding to said first content request as part of updating said locally cached streaming content.

3. (Cancelled).

4. (Previously Presented) The method of claim 2, further comprising:

determining, if the streaming content corresponding to the first content request is locally cached, whether to update the locally cached streaming content corresponding to the first content request;

re-streaming the locally cached streaming content as the content corresponding to the first content request in place of performing the generating, transmitting, receiving and caching steps if the locally cached streaming content is not to be updated; and

performing the generating, transmitting, receiving and caching steps if the locally cached streaming content is to be updated.

5. (Previously Presented) The method of claim 4, wherein determining whether to update the locally cached streaming content corresponding to the first content request comprises at least one of:

determining if the locally cached streaming content corresponding to the first content request is older than an update age;

determining if the locally cached streaming content corresponding to the first content request is a type of content that is to be updated automatically;

determining if the locally cached streaming content corresponding to the first content request includes expiration information;

determining if the content request includes an indication to update the locally cached streaming content; and

determining if the streaming content corresponding to the first content request has been fully locally cached or partially locally cached.

6. (Previously Presented) The method of claim 4, further comprising:

determining whether at least one secondary server is known to store at least a type of content that corresponds to the streaming content corresponding to the first content request based on a stored content map;

searching, if at least one secondary server is not known, a plurality of secondary servers to identify at least one secondary server that contains at least a type of content that corresponds to the streaming content corresponding to the first content request;

adding, in response to the searching step, to the stored content map the at least one identified secondary server located by the search; and

transmitting, based on the at least one secondary server identified in the content map, the second content request to that at least one secondary server in response to either the adding step or the at least one secondary server determining step.

7. (Previously Presented) The method of claim 2, further comprising:

determining whether at least one secondary server is known to store at least a type of content that corresponds to the streaming content corresponding to the first content request based on a stored content map;

searching, if at least one secondary server is not known, a plurality of secondary servers to identify at least one secondary server that contains at least a type of content that corresponds to the streaming content corresponding to the first content request;

adding, in response to the searching step, to the stored content map the at least one identified secondary server located by the search; and

transmitting, based on that at least one secondary server identified in the content map, the second content request to that at least one secondary server in response to either the adding step or the at least one secondary server determining step.

8. (Previously Presented) The method of claim 1, further comprising:

determining whether at least one secondary server is known to store at least a type of content that corresponds to the streaming content corresponding to the first content request based on a stored content map;

searching, if at least one secondary server is not known, a plurality of secondary servers to identify at least one secondary server that contains at least a type of content that corresponds to the streaming content corresponding to the first content request;

adding, in response to the searching step, to the stored content map the at least one identified secondary server located by the search; and

transmitting, based on the at least one secondary server identified in the content map, the second content request to that at least one secondary server in response to either the adding step or the at least one secondary server determining step.

9. (Cancelled)

10. (Cancelled)

11. (Previously Presented) A system usable to cache and redistribute streaming digital data content in real time to a plurality of requesting client machines, said system comprising a proxy server able to receive a first content request for a streaming content from a requesting client machine, wherein said requesting client machine does not send information identifying a secondary server containing said streaming content corresponding to said first content request, and said proxy server able to generate and transmit a second content request to at least one secondary server known to contain said streaming content, and said proxy server able to receive the streaming content from said at least one secondary server in response to said second content request and cache at least a first portion of the received streaming content locally and re-streaming the first portion of the streaming content to the requesting client machine as at least a second portion of said received streaming content is cached, and re-streaming, at a later time from the local cache, at least one of the first portion and the second portion of the streaming content to a same or different requesting client machine in response to a subsequent content request.

12. (Previously Presented) The system of claim 11, further comprising a storage device usable to cache said streaming content locally relative to the proxy server.

13. (Previously Presented) The system of claim 12, wherein the proxy server determines whether said streaming content corresponding to the first content request is cached, partially or fully, in the storage device, such that, if any part of said streaming content corresponding to the first content request is cached in the storage device, the proxy server re-streams that part of the streaming content cached in the storage device corresponding to the first content request to the requesting client machine as at least a part of the streaming content corresponding to the first content request.

14. (Previously Presented) The system of claim 12, wherein the proxy server determines, for a particular streaming content cached in the storage device, whether to update that particular streaming content cached in the storage device in response to receiving a content request to which that particular streaming content corresponds.

15. (Previously Presented) The system of claim 14 wherein, when the proxy server determines to update the streaming content, the proxy server transmits a second content request to which that particular streaming content corresponds to at least one secondary server.
16. (Previously Presented) The system of claim 12, further comprising a content map that indicates, for at least some content requests, at least one secondary server known to store at least a type of streaming content that corresponds to that content request, and wherein said content map indicates, at least for some content requests, if a streaming content corresponding to a content request needs to be updated because only a part of said streaming content is presently cached in said storage device.
17. (Original) The system of claim 16, wherein the proxy server determines the at least one secondary server to which the second content request is transmitted based on the content map.
18. (Previously Presented) The system of claim 16, wherein the proxy server determines whether the content map indicates at least one secondary server known to store at least a type of content that corresponds to the streaming content corresponding to the first content request, the proxy server generating a search of a plurality of servers if the content map does not indicate at least one secondary server known to store at least a type of content that corresponds to the streaming content corresponding to the first content request, and the proxy server updating the content map based on results of the search.
19. (Original) The system of claim 11, further comprising a content map that indicates, for at least some content requests, at least one secondary server known to store at least a type of content that corresponds to that content request.
20. (Original) The system of claim 19, wherein the proxy server determines the at least one secondary server to which the second content request is transmitted based on the content map.
21. (Previously Presented) The system of claim 19, wherein the proxy server determines whether the content map indicates at least one secondary server known to store at least a type of content that corresponds to the streaming content corresponding to the first content request, the proxy server generating a search of a plurality of secondary servers if the content map does not indicate at least one secondary server known to store at least a type of content that corresponds to

the streaming content corresponding to the first content request, and the proxy server updating the content map based on results of the search.

22. (Previously Presented) A system to cache and redistribute streaming digital data content in real time to a plurality of requesting client machines, said system comprising:

means for receiving a first content request, for a streaming content, from a requesting client machine, wherein said requesting client machine does not send information identifying a secondary server containing said streaming content corresponding to said first content request;

means for generating a second content request based on said first content request and transmitting said second content request to at least one secondary server known to contain said streaming content;

means for receiving said streaming content in response to the second content request from said at least one secondary server ;

means for locally caching at least a first portion of the received streaming content;

means for re-streaming the first portion of the cached streaming content to the requesting client machine as at least a second portion of the received streaming content is cached, and

means for re-streaming, at a later time from the local cache, at least one of the first portion and the second portion of the streaming content to a same or different requesting client machine in response to a subsequent content request.

23. (Previously Presented) The system of claim 22, further comprising a storing means for caching said streaming content locally relative to the means for receiving.

24. (Previously Presented) The system of claim 23, further comprising means for determining whether said streaming content corresponding to the first content request is cached in the storing means, such that, when said streaming content corresponding to the first content request is cached in the storing means, the means for re-streaming the received streaming content re-streams the streaming content cached in the storing means corresponding to the first content request to the requesting client machine as the streaming content corresponding to the first content request.

25. (Previously Presented) The system of claim 23, further comprising an updating means for determining, for a particular streaming content cached in the storing means, whether to update that particular streaming content cached in the storing means in response to receiving a content request to which that particular streaming content corresponds.

26. (Previously Presented) The system of claim 25, wherein, when the updating means determines to update the streaming content, the means for generating and transmitting transmits a second content request, to which that particular streaming content corresponds, to at least one secondary server.

27. (Previously Presented) The system of claim 22, further comprising a content map that indicates, for at least some content requests, at least one secondary server known to store at least a type of content that corresponds to that content request.

28. (Original) The system of claim 27, wherein the means for generating and transmitting determines the at least one secondary server to which the second content request is transmitted based on the content map.

29. (Previously Presented) The system of claim 27, wherein the means for generating and transmitting determines whether the content map indicates at least one secondary server known to store at least a type of content that corresponds to the streaming content corresponding to the first content request, the means for generating and transmitting generating a search of a plurality of secondary servers if the content map does not indicate at least one secondary server known to store at least a type of content that corresponds to the streaming content corresponding to the first content request, the means for generating and transmitting updating the content map based on results of the search.

30. (Cancelled)

31. (Cancelled)

32. (Cancelled)